

**Amendments to the Specification:**

Please replace paragraph [00022] with the following amended paragraph:

[00022] Figure 2 is a block diagram of a transmitter 10, preferably located at a base station, and a receiver 20, preferably located at a user equipment (UE), in a CDMA communication system in accordance with the preferred embodiment of the present invention. Although it is preferable to have the transmitter located at a base station and the receiver located at the UE, the receiver and transmitter may switch locations and the present invention operate on an uplink communication. The transmitter 10 comprises a block encoder 11, a plurality of channelization devices 8, 9, a plurality of spreading sequence insertion devices 12, 13, and a plurality of antennas 15, 16. Although Figure [1] 2 illustrates a transmitter comprising two (2) antennas, it should be apparent to those having skill in the art that more than two (2) antennas may be used, such as N antennas.

Please replace paragraph [00032] with the following amended paragraph:

[00032] Similar to the preferred embodiment disclosed above, Figure 5 is a block diagram of an alternative transmitter 40, preferably located at a base station, and a receiver 50, preferably located a user equipment (UE) in a communication system. The transmitter 40 comprises a plurality of channelization devices 48, 49, a

plurality of spreading sequence insertion devices 42, 43, and a plurality of antennas ~~45, 46~~ 46, 47.

Please replace paragraph [00033] with the following amended paragraph:

[00033] Data to be transmitted by the transmitter 40 is produced by a data generator (not shown). The resulting data symbols ( $S_1, S_2, \dots S_{N/2}$ ), ( $S_{N/2+1}, S_{N/2+2}, \dots, S_N$ ) of the first data field, which can be represented by sub-data fields  $D_1$  and  $D_2$ , are input to a first and second channelization device 48, 49, respectively. The first channelization device 48 [8] spreads the data blocks  $D_1, D_2$  by a first channelization code, and the second channelization device 49 spreads the data blocks  $D_1, D_2$  by a second different channelization code. Each of the spread data blocks from the first and second channelization devices 48, 49 are scrambled by the scrambling code associated with the transmitter 40.

Please replace paragraph [00035] with the following amended paragraph:

[00035] The receiver 50 comprises a joint detection device (JD) 54, a decoder 22 52, a channel estimation device 53 and an antenna 51. The antenna 51 of the UE receives various RF signals including the communication bursts 44, 45 from the transmitter 40. The RF signals are then demodulated to produce a baseband signal.